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PATENT SPECIFICATION



Application Date: June 20, 1935. No. 17790/35.

447,712

(Patent of Addition to No. 438,076: Dated July 26, 1934.)

Complete Specification Accepted: May 25, 1936.

(Under this Application, which was originally made under Section 91 of the Patents and Designs Acts, 1907 to 1932, a Specification was laid open to public inspection on Dec. 21, 1935.)

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COMPLETE SPECIFICATION

Improvements relating to the Packaging of Articles

We, WILLIAM WARREN TRIGGS, of the firm of Marks and Clerk, 57 & 58, Lincoln's Inn Fields, London, W.C. 2, a British subject, and LEROY LINCOLN Salfisberg, a citizen of the United States of America, of 39, University Court, South Orange, State of New Jersey, United States of America, do hereby declare the nature of this invention and in what manner the same is to be performed, to be particularly described and ascertained in and by the following statement:—

This invention relates to package constructions of regenerated cellulose and is an improvement in or modification of the invention claimed in the prior application No. 21817 of 1934 (Serial No. 438,076).

In the specification of the prior application aforesaid is described and claimed a package structure of regenerated cellulose coated with a fusible material in which part at least of the boundary of the article retaining portion of the package is in an oxidized embrittled condition to facilitate the opening of the package and the removal of the article therefrom. The present invention consists broadly in a package structure comprising a structure as defined above (hereinafter to obviate duplication of terms referred to as a package unit) bonded in leaved relationship to at least one cover sheet, to at least one other such package unit, or to both.

In order that the invention may be clearly understood reference will now be made to the accompanying drawings in which several constructional forms are illustrated by way of example, and in which:—

Fig. 1 is a top plan view of a preferred embodiment;

Fig. 2 is a sectional view taken along the line 2—2 of Fig. 1;

Fig. 3 is a top plan view of another embodiment;

Fig. 4 is a side view of the representation of Fig. 3;

Fig. 5 is a view showing a modification of the structure of Figs. 1 and 2;

[Price 1/-]

Fig. 6 is a transverse sectional view of the representation of Fig. 5 taken along the line 6—6;

Fig. 7 is a view of another form of the package with a closure arrangement; and

Fig. 8 is a side view of the representation of Fig. 7.

Referring to the drawings in detail, and particularly to Figs. 1 and 2, there are provided a plurality of sheets of flexible viscose material 1, 2, 3, and 4. The material of these sheets is regenerated cellulose having a heat treatment coating thereon. The sheets 1 and 2 together form a multiple article-enclosing package unit. In accordance with the principles of our invention there may be any number of such package units, but for purposes of simplicity we will limit our present disclosure to two such units.

One of these package units will now be considered in more detail. The sheets, say 3 and 4, are divided into a multiplicity of adjacent squares by a crimping process which forces the two sheets 3 and 4 together into an interdigitated bond. This forced crimping is done under heat conditions so that the structure of the coated viscose material is changed to become embrittled in the crimped portions, thus forming a very tightly sealed bond and also being more easily susceptible to tearing by the consumer to allow the packaged article to be easily removed.

Referring to Fig. 1 it will be noted that the squares are separated by the vertical areas "a" and "b", and the narrow horizontal area "c", in which no crimping occurs. These areas form separation lines for the squares and also serve as guide lines for guiding the tearing of the embrittled structure in removing a square by the consumer. Other horizontal lines, such as represented by the area "d" are also without crimping and lead into the article-containing recess "E" between the sheets 3 and 4. These lines represented by "d" are also tearing guide lines which guide the tearing of the embrittled portions into the package contain-

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ing recess "E". It will be seen that in the center of each of the crimped squares the recess "E" is provided in circular formation within which the package commodity is placed. For example, a round pill 6 may be placed within the recess "E" as shown, although several such pills or other forms of articles for individual use can be placed therein.

10 Between the squares are perforated portions 8, 11 and 12 as shown. These perforated portions are cuts extending through the two sheets 3 and 4 and form starting points for tearing each of the individual squares. In other forms of our invention we may also provide these perforated starting portions at the beginning of the guide lines represented at "d" and in still another form we may 15 omit the guide areas "d" altogether. It will be understood that the package-unit forming sheets 1 and 2 are similar to the package-unit forming sheets 3 and 4.

Underneath the unit comprising sheets 20 1 and 2 there is provided a sheet 9, while above the unit comprising sheets 3 and 4 there is provided a sheet 10. Sheets 9 and 10 are preferably formed of material similar to that of which the sheets 1-4 25 are composed and serve as top and bottom covers and indicia sheets. Upon these sheets 9 and 10 various indicia may be placed. On the front sheet the name of the manufacturer and various advertising 30 may be provided, while on the bottom sheet 9 instructions for use of the packaged commodity may be placed. This arrangement can be varied, of course, at will, the sheets 9 and 10 serving as indicia 35 cover sheets in general for any desired purpose.

The uppermost portions of the sheets 1-4 and the sheets 9 and 10 are joined together over an area "F" which is processed to form a crimped bond similar to the crimping surrounding the recesses "E". This bond area "F" is embrittled and due to the thickness of the several sheets forms a binding area or 40 backing for the leaved or "book" construction of the package as a whole.

In use, the consumer may selectively remove the packaged commodity from each square for individual use in accordance with instructions on the indicia cover 45 sheets. Although these individual squares may be torn out for individual use from time to time, the area "F" is still maintained intact to support the indicia cover sheets and maintain the identity and form 50 of the package.

Fig. 3 represents another form of the leaved package construction of our invention. This construction is similar to the 55 construction of Figs. 1 and 2 except that the unit comprising the sheets 1 and 2 is staggered with respect to the unit comprising the sheets 3 and 4. This staggering is arranged so that the packaged commodity carried by sheets 1 and 2 is positioned in the spaces between the packaged commodity carried by the sheets 3 and 4, thus effecting a spatial arrangement in which the packaged articles are arranged in rows in echelon. This spatial arrangement makes it possible to more compactly close the separate package units since the recesses "E" are staggered with respect to each other and therefore do not abut one above the other. Fig. 4 shows how the package units comprising the sheets 1 and 2 and the sheets 3 and 4, respectively, can be positioned very closely when the package as a whole is closed.

In this arrangement shown in Figs. 3 and 4 there are provided sheets 9a and 10a which are cover indicia sheets similar to the sheets 9 and 10. However, the sheets 9a and 10a are of a width represented by "A" in Fig. 3, while the sheets 1 and 2 are of a width represented by "B", and the sheets 3 and 4 are of a width represented by "C". It will be seen that the staggered spacing of the package units is equivalent to the spacing between the packaged articles in each respective unit, the cover indicia sheets being wider than either of the package units. The exact relationship of the staggered arrangement is quite apparent from the representation 100 of Fig. 3. In other respects, the package of Fig. 3 is similar to the package of Fig. 1.

Figs. 5 and 6 represent a structure substantially similar to that depicted in Figs. 105 1 and 2, except that, in this instance, cover sheets 9b and 10b are integrally contiguous and provided with a central row of perforations 15. It will be noted that the package sheets 1 and 2 extend 110 into the notch provided by the closure of the sheets 9b and 10b and are held thereby. In this arrangement the commodity-containing sheets 1 and 2 are not exposed to handling or misuse until the package 115 as a whole is ready for use. When the consumer desires to begin the use of the package in removing individual articles, he may open the booklet by severing along the perforations 15, thereby exposing the 120 package-containing leaf between the cover sheets.

The structure shown in Figs. 7 and 8 is similar to that shown in Figs. 3 and 4 except that the cover sheets 9c and 10c are 125 provided with extending portions at the lower side of the package. Similarly, the sheets 1-4 are also provided with a lower extending portion. These lower extending portions are all bonded together under 130.

a heat and crimping treatment to provide a bonding area "G" similar to bonding area "F". A weakened separation line 17 is provided extending across the package 5 immediately above the area "G" and notches 16 are provided in this area to permit easy separation of the area "G" from the rest of the package. The area "G" forms an embrittled inseparable oxidized bond. When the consumer 10 wishes to use the package he may grasp the area "G" with his fingers and remove the same by tearing from the notches 16 along a separation line 17. The package 15 is then in open booklet form with the individual package leaves exposed for use in separation of the individual commodity units. It will be understood of course that the booklet cover sheets shown in Figs. 20 5-8 may be of various materials including coated regenerated cellulose and can be provided with indicia in the form of instructions and advertising material similar to the corresponding cover sheets described in connection with Figs. 1-4.

The closure feature not only avoids unnecessary exposure and mishandling of the booklet package sheets before they are 25 in active use, but maintains them in the proper structural position to avoid bending and separation of the leaved structure.

The cover sheets 9b and 10b as well as the cover sheets 9c and 10c can also be sealed along the right hand and left hand 30 edges as shown in Figs. 5 and 7 so as to form completely enclosing envelopes. These seals may also be provided with perforations and weakened areas so that the package will be in book form when 35 40 these seals are broken.

Having now particularly described and ascertained the nature of our said invention and in what manner the same is to be performed, we declare that what we 45 claim is:—

1. A package structure comprising a package unit of regenerated cellulose coated with a fusible material in which part at least of the boundary of the article 50 retaining portion of the package is in an oxidized embrittled condition bonded in leaved relationship to at least one cover sheet.

2. A package structure comprising a package unit of regenerated cellulose coated with a fusible material in which part at least of the boundary of the article retaining portion of the package is in an oxidized embrittled condition bonded in 55 60 leaved relationship to at least one other such package unit.

3. A package structure comprising a package unit of regenerated cellulose coated with a fusible material in which 65 part at least of the boundary of the article

retaining portion of the package is in an oxidized embrittled condition bonded in leaved relationship to at least one cover sheet and at least one other such package unit.

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4. A package structure according to any preceding claim in which the (or each) package unit includes a plurality of sections each comprising an article retaining enclosure the boundary of which is at least 75 in part in an oxidized embrittled condition.

5. A package structure according to claim 4 in which the sections of the (or each) package unit are separably united.

6. A package structure according to 80 claim 5 in which substantially the entire boundary of each article retaining enclosure is in an oxidized embrittled condition.

7. A package structure according to 85 claim 6 in which each section includes at least one unoxidized guide line extending from the article retaining enclosure to the margin of the section.

8. A package structure according to 90 claim 6 or 7 in which the sections of the (or each) package unit are separated by unoxidized guide lines.

9. A package structure according to 95 claim 7 or 8 in which the said guide lines are weakened.

10. A package structure according to any of claims 2 to 9 in which the article retaining portions or enclosures of adjacent package units are disposed in 100 staggered relationship.

11. A package structure according to any preceding claim in which the (or each) cover sheet is of regenerated cellulose coated with a fusible material and 105 said sheet (or sheets) and the package unit (or units) are united by an oxidized embrittled bond.

12. A package structure according to claim 11 in which the said cover sheet (or 110 sheets) and package unit (or units) are united at one edge of the structure only.

13. A package structure according to claim 11 in which the said cover sheet (or 115 sheets) and package unit (or units) are united at opposite edges of the package structure.

14. A package structure according to claim 11 in which the said cover sheet (or sheets) and package unit (or units) 120 are united completely around the package structure.

15. A package structure according to claim 13 or 14 in which the material of the structure is weakened adjacent at least 125 one bond.

16. A package structure according to claim 11 in which a single cover sheet is employed which extends completely 130 around the package unit (or units) and

both ends of which are united to the said unit (or units) at one edge of the structure.

17. A package structure according to 5 claim 16 in which the said cover sheet is weakened at the edge of the structure opposite to that at which it is united with the package unit (or units).

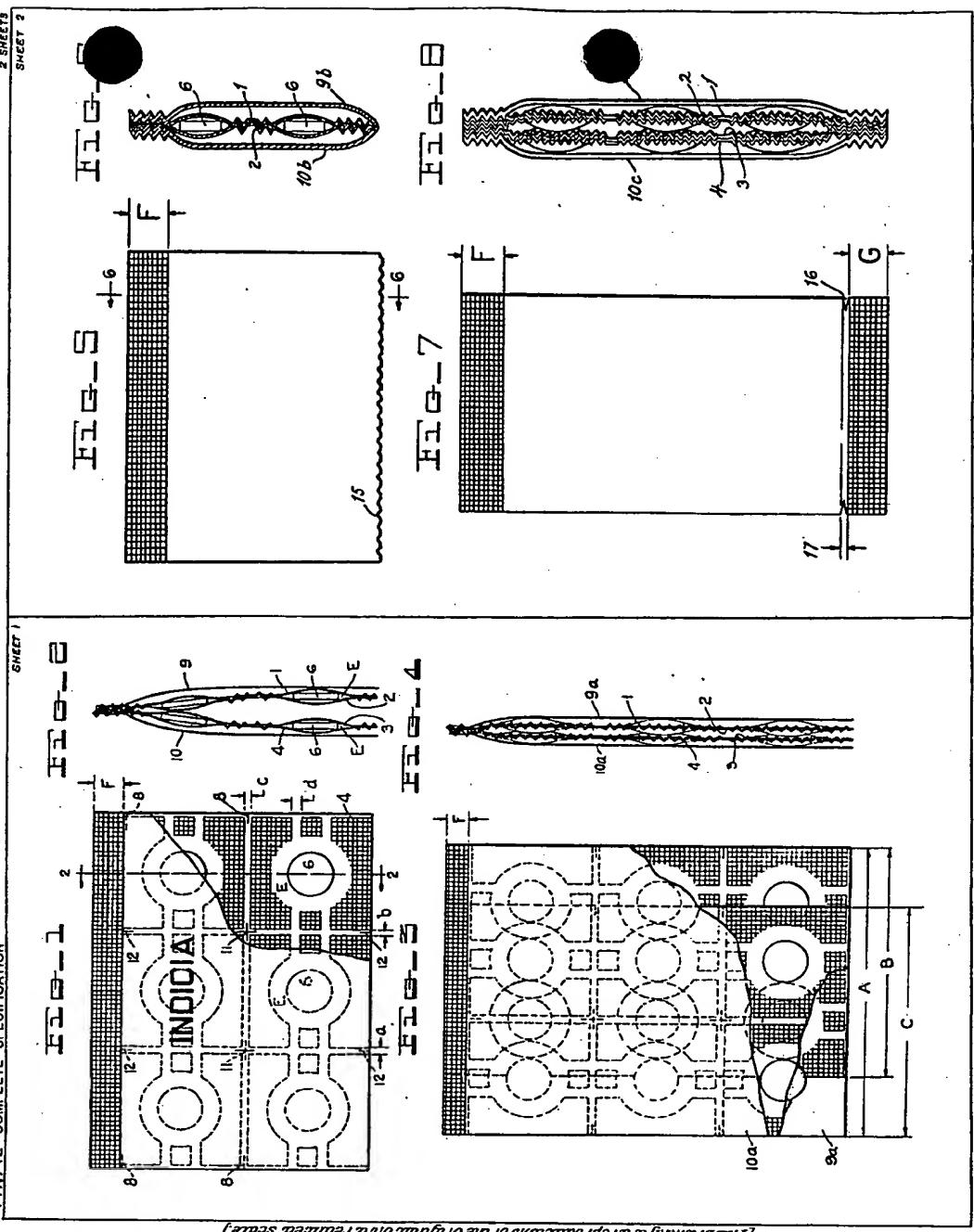
18. A package structure according to

claim 16 or 17 in which the edges of the 10 folds of the said cover sheet are united to form a closed container.

19. A package structure substantially as described with reference to any form illustrated by the accompanying drawings.

Dated this 20th day of June, 1935.
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FIG. 5

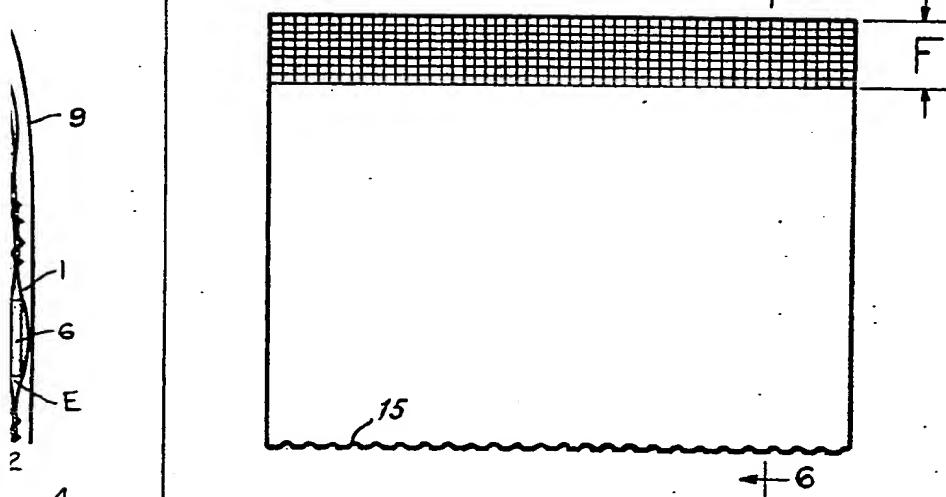


FIG. 6

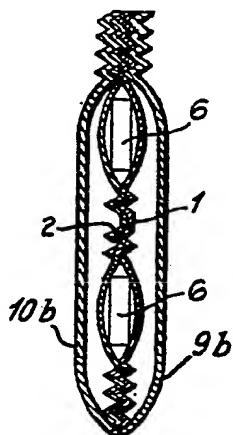


FIG. 7

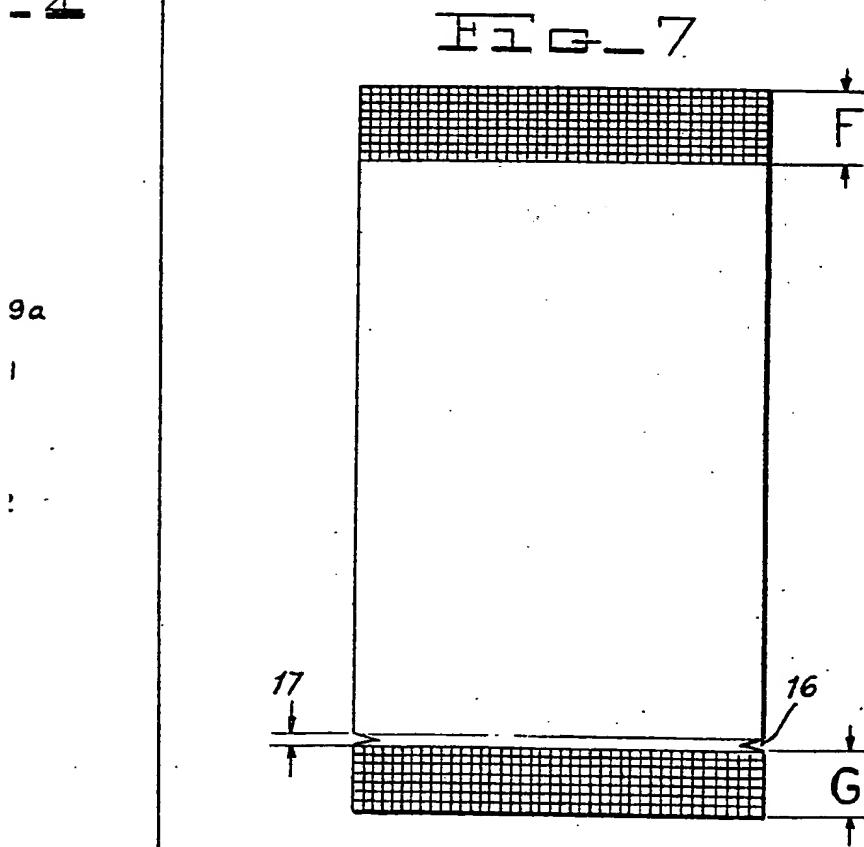
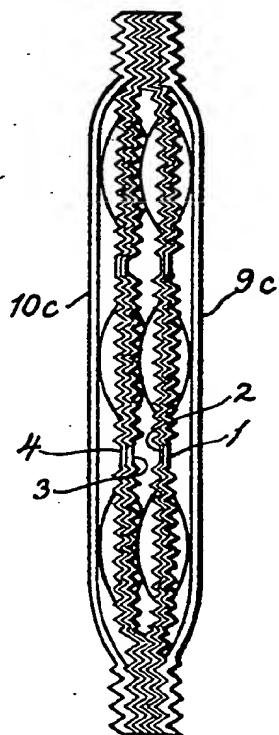


FIG. 8



447,712 COMPLETE SPECIFICATION

SHEET 1

(This Drawing is a reproduction of the Original on a reduced scale.)

